(19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 1 September 2005 (01.09.2005)

PCT

(10) International Publication Number WO 2005/080012 A1

(51) International Patent Classification⁷: B08B 9/055

(21) International Application Number:

PCT/IB2004/000719

(22) International Filing Date: 22 January 2004 (22.01.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(71) Applicant (for all designated States except US):
PETROLEO BRASILEIRO S.A. - PETROBRAS
[BR/BR]; Av. Republica do Chile, 65, CEP-21949-900
Rio De Janeiro, RJ (BR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): LINO, Antonio, Carlos, Ferreira [BR/BR]; Rua Primeiros Sonhos, 250, Apto. 302, Ilha do Governador, CEP-21941-240 Rio De Janeiro, RJ (BR). CAPLLONCH, Ricardo, Wagner [BR/BR]; Rua Almeida Pinto, 170, Lucas, CEP-25964-050 Teresopolis, RJ (BR).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

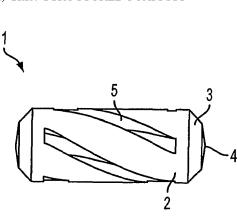
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: STRUCTURED FOAM PIG



(57) Abstract: The present invention relates to a device intended to be passed through a pipeline of variable diameter, propelled by a liquid flowing inside said pipeline. The device has an elongated cylindrical body (2) made of polymer foam, with a number of deep channels (5) equally spaced from each other, coiled around the length of the cylindrical body (2) of the pig (1), beginning close to one end of the body (2) and ending close to the other end. These ends have a basically bulled-nosed shape, conferring a symmetrical aspect. Structural cleaning elements (6), not interconnected, are inserted inside the cylindrical body (2) of the pig. They are made of elastomeric material and have a central core (7) with spiral scraping extensions (8) of the same number as the deep channels (5) in the body (2) of the pig (1). The spiral scraping extensions (8) are at an angle to the axis of the cylindrical body (2) of the pig (1) as well as to the scraping extensions (8) of the adjacent modules, inasmuch as they follow the configuration of the spiral channel (5).

WO 2005/080012 A1